

3 Glycol Handling Procedure

Written Procedure

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This procedure covers filling or draining of propylene glycol from the COUPP 4-kg hydraulic system at SNOLab. Hazards associated with glycol handling include that skin and eye contact may cause irritation and absorption of glycol into the body. High concentrations of glycol vapours should also be avoided. In addition, there is an increased risk of glycol spillage during handling procedures.

The operational goal of glycol handling is to get the cart filled with appropriately de-gassed polypropylene glycol without air bubbles or voids, to adjust the volume of glycol in the hydraulic system, or to drain the system for maintenance or decommissioning.

For all glycol handling, prior to handling,

- 1) Consult the appropriate glycol handling procedure.
- 2) Place the required tools, glycol containers, plumbing, clean-up materials, and a chair near the work area. Absorbent pads, paper absorber, glycol waste bags, drip pans, and a water spray bottle are required within the work area. If vacuum seals are being made, have Kimwipes available.
- 3) If a glycol volume is being pumped down or containers openings large than 15cm (6") in diameter are being used, erect a permissive barrier at least 1.5 metres from any open glycol handling being performed. Attach caution tags indicating that glycol handling is being performed and that gloves, goggles, and overgarments are required.
- 4) If software control of the hydraulic system is required, make the PXI workstation accessible to the work area and cover the mouse with paper absorber, or have a helper outside of the work area to control the software.
- 5) Wear suitable PPE. For handling operations where a spill hazard exists, impermeable tear resistant gloves, and disposable overgarments are required. If a glycol volume is being pumped down or containers openings large than 15cm (6") in diameter are being used, respirators are required.

During glycol handling,

- 6) If you have to leave the work area, ensure that your footwear is free of glycol. Use paper absorber and water to clean boots. Remove your gloves when leaving the work area.
- 7) If glycol is spilled, immediately cover it with an absorber. Clean it up, or avoid stepping in it until a cleanup can be performed.

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After handling glycol and before removing PPE, in order

- 8) Ensure all glycol containers are closed.
- 9) Clean out glycol residue from any used containers or vacuum filters. Use absorber to remove glycol, then rinse the container with a water spray and dry the container.
- 10) If your gloves are contaminated with glycol, change them for clean gloves.
- 11) Cleanup any spills with absorber, rinse with water spray, and dry.
- 12) Ensure your boots are free of glycol, clean them if required.
- 13) Dispose of gloves and overgarments and remove the permissive barrier.
- 14) Continue cleaning up the work area.